AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0001] with the following amended paragraph:

[0001]   This application is related to U.S. application serial no. 10/741,038, filed on December 19, 2003, entitled "Bit-Plane Formatting Including Zero Bit-Plane Detection"; U.S. application serial no. 10/742,381, filed on December 19, 2003, entitled "Magnitude Refinement Coding"; U.S. application serial no. 10/741,572, filed on December 19, 2003, entitled "Run Length Coding and Decoding"; U.S. application serial no. 10/741,027, filed on December 19, 2003, entitled "Sign Coding and Decoding"; U.S. application serial no. 10/742,118, filed on December 19, 2003, entitled "Zero Coding"; and U.S. application serial no. 10/742,155, filed on December 19, 2003, entitled "Zero Coding or Run Length Coding Decision."

Please replace paragraph [0033] with the following amended paragraph:

[0033]   Embodiments of the invention provide a zero coding or run length coding decision instruction. This decision is based on significance state variable Sigma being zero. In particular, the instruction will determine whether significance state variable Sigmas associated with four selected coefficients bits and their immediate neighbors are zero. If they are zero, then run length coding is performed. Else, zero coding is performed. When performing run length coding, the pixel bits are used after wavelet transformation to determine the output context (CX) and decision (D) as shown. When performing zero coding, the significance state variable sigmas are used to determine the output context (CX).

Please replace paragraph [0033] with the following amended paragraph:

[0035]   Embodiments of the instruction will determine whether zero coding or run length coding should be implemented based upon the significance state variable sigmas of selected coefficient bits 404-410 and immediate horizontal and vertical neighboring bits 412-430 438. If they are zero, then run length coding is performed else zero coding is performed. The instruction is expanded to include NxM zero checks but in example the zero check is 3X6. This check is preferably performed on every 4 pixels and in every bit plane.